

# **Forest Restoration in Arizona**

## ***SRP's Biomass Test Burn Objectives***




**Bruce Hallin – Director, Water Supply**



# SRP Reservoir System

## Verde River Dams



Horseshoe Dam  
(1951)

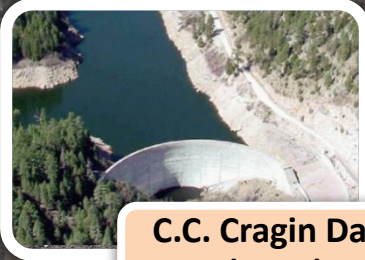
A wide-angle photograph of the Horseshoe Dam, a large concrete structure with multiple spillways, situated in a dry, hilly landscape. A green arrow points from this image to the Bartlett Dam image below.



Bartlett Dam  
(1939, 1997)

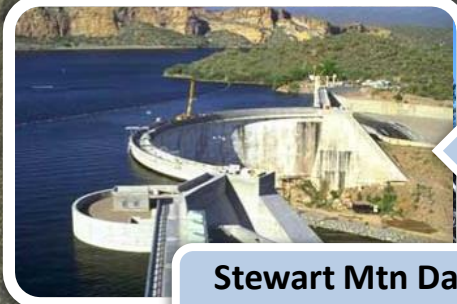
A photograph of the Bartlett Dam, a concrete dam with a series of vertical spillways, set against a backdrop of dry, hilly terrain. A green arrow points from this image to the Stewart Mtn Dam image below.

## East Clear Creek Dam



C.C. Cragin Dam  
(1965)

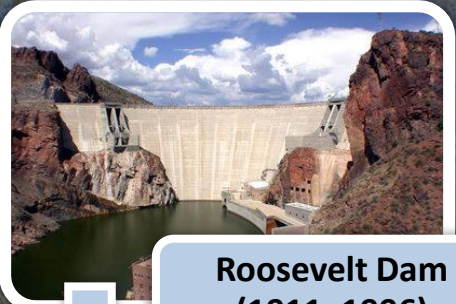
An aerial photograph of the C.C. Cragin Dam, a large concrete dam with a curved spillway, surrounded by dense green forest. A blue arrow points from this image to the Stewart Mtn Dam image below.



Stewart Mtn Dam  
(1930, 1992)

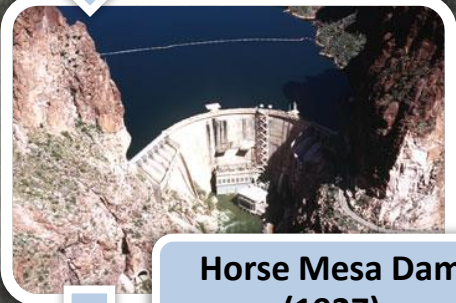
A photograph of the Stewart Mtn Dam, a large concrete dam with a curved spillway, situated in a dry, hilly landscape. A blue arrow points from this image to the Mormon Flat Dam image below.

## Salt River Dams




Roosevelt Dam  
(1911, 1996)

A photograph of the Roosevelt Dam, a large concrete dam with a curved spillway, situated in a dry, hilly landscape. A blue arrow points from this image to the Horse Mesa Dam image below.



Horse Mesa Dam  
(1927)

A photograph of the Horse Mesa Dam, a large concrete dam with a curved spillway, situated in a dry, hilly landscape. A blue arrow points from this image to the Mormon Flat Dam image below.

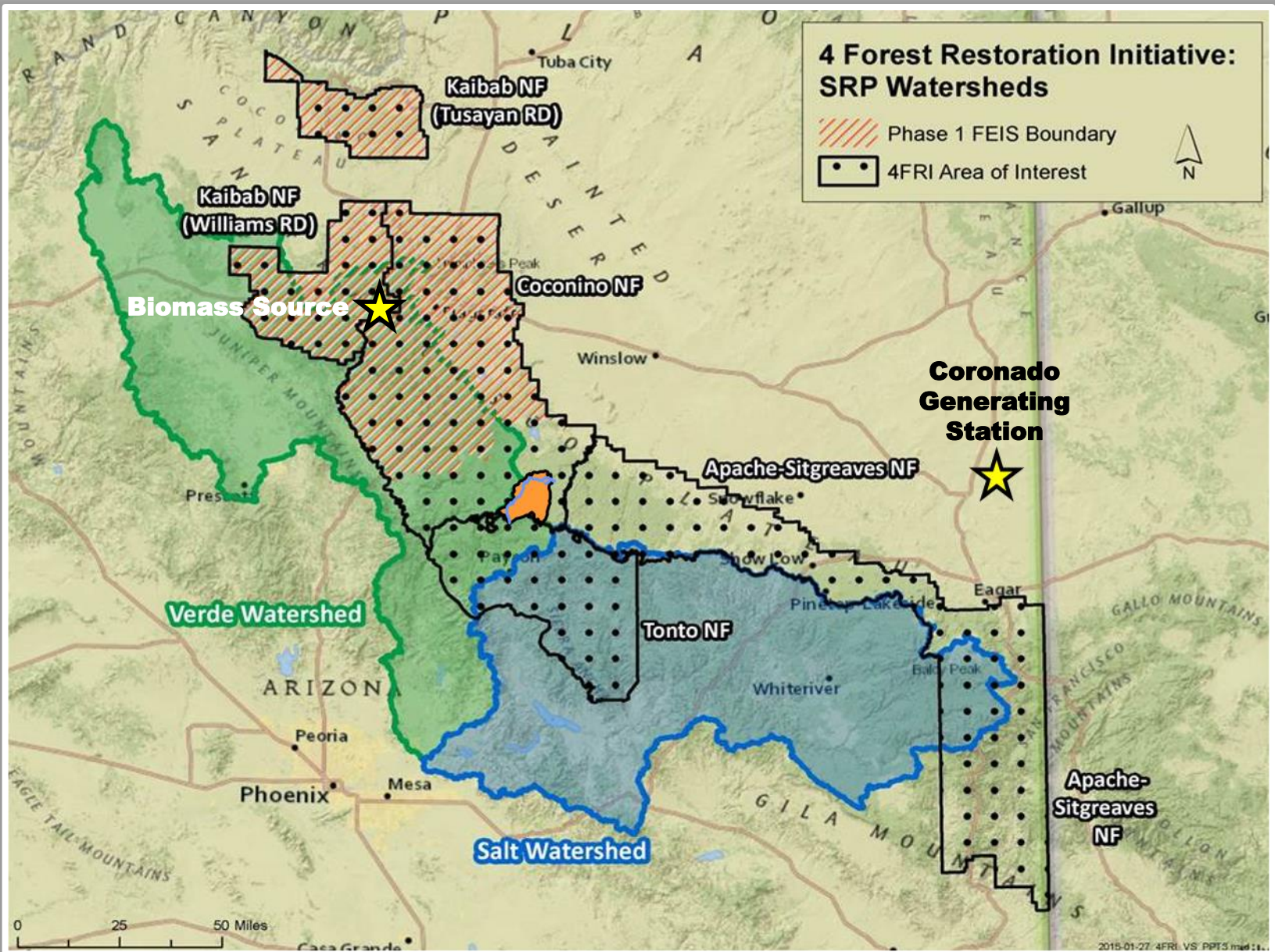


Mormon Flat Dam  
(1925)

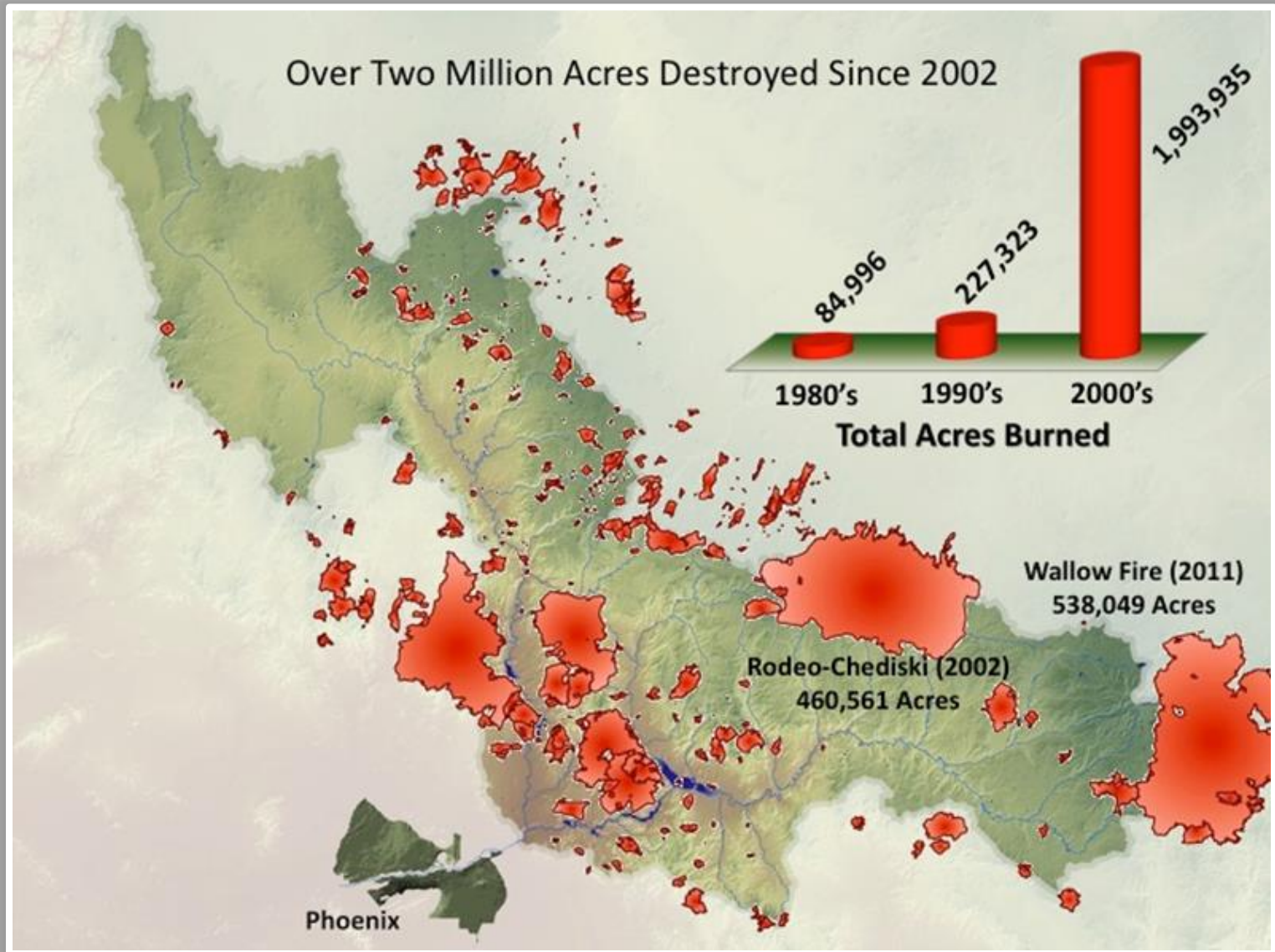
A photograph of the Mormon Flat Dam, a large concrete dam with a curved spillway, situated in a dry, hilly landscape. A blue arrow points from this image to the Stewart Mtn Dam image above.



# 4FRI and Watershed Preservation



# Watershed Risk





# Water Resource Risk



Reservoir Capacity Loss



Damage to Infrastructure



Water Quality Degradation





# Why A Biomass Test at CGS?

- Improve Forest Health
- Protect SRP Watersheds
- Protect SRP Infrastructure
- Protect Water Quality
- Evaluate as a Low Cost Alternative to Burning in the Forest
- Re-Establish Forest Product Industry



# Test Burn Results



Approximately 2,600 tons of biomass burned during 21 days of testing, 1/2" minus target chip size

Ponderosa pine biomass sourced from State Lands, \$100,000 grant funding from State of Arizona/DOE

Test showed 2% mix feasible, 5% unachievable without plant modifications or feedstock changes

Some operational and mechanical challenges to overcome

# Path Forward



Evaluated Three Other Options Based on  
Results from Initial Test



Preferred Option: Direct Injection to the  
Coal Pipes



Seek Partners to Offset Costs  
Attract Forest Products Industry to Arizona



# SRP Forest Restoration Investments



NORTHERN  
ARIZONA  
FOREST  
FUND



The Nature  
Conservancy



enginuity  
worldwide



**Questions?**

